



Radio Amateur News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

December, 2000

Happy Holidays from RANV

Vol. 11 No. 12

RANV HOLIDAY PARTY Our December Meeting

Join us for the gala event of the year – the RANV Holiday Party, on Tuesday, December 12th. The Party is a fun gathering for members, family and our friends in the ham radio community. We have a lot to celebrate this year! First, will be to share in the spirit of the season. We made it through another year and even survived Y2K! Another special event we will celebrate is the second “win” at Field Day. While Field Day is not really about winning or losing, it is special that we acknowledge the extra effort and the result those efforts brought. We might not get to this point again for years, so let’s celebrate now! March, 2001 marks the 10th anniversary of RANV, and this is the perfect time to celebrate this milestone. To mark this event, we hope to have some of the “founding fathers” at this event and upcoming meetings in 2001. I also have a rare, never-before-seen videotape of the first RANV meeting! WOW! And finally, hosts W1DEB and W1SJ want to share the joyousness of their wedding and happiness this year with a “few” of their friends.

Unlike past years, a major focus of this year’s event will be food, so bring an appetite! Some of the food ideas will include the deli platter, veggies, munchies, soup, cocktail franks and meatballs, knishes, drinks and all kinds of desserts. Feel free to suggest other items. In between the eating and talking and eating and talking, we will have pictures and videos of past ham radio debauchery. Besides the aforementioned first RANV meeting, we have the notorious last ETV auction which RANV members closed down in high style. Carl KC1WH promises to bring several years of never seen Field Day videos. The W1SJ shack will be open to transmit the high jinx to the world. The rumors of an Internet broadcast are not true!

Festivities get underway at 5:30. Show up whenever it works for you, since we will be here all night. The party will be at W1SJ in Essex Junction. If you need directions, call or E-mail Mitch and he will get you squared away.

Also, please let Mitch know how many in your party are coming so that the proper planning can be done. E-mail is the best way to do this. It is not required that you bring anything. However, if you care to bring a dish, dessert or other, please let Mitch know so he can coordinate the effort.

The only thing left to do is to come. The party will run rain or shine. Of course, there is no chance that the latter will occur!

10 METER CONTEST

Don’t miss out on all the fun and excitement generated by the ARRL 10 Meter Contest occurring this weekend. We are at sunspot maximum right now, which means that conditions on 10 Meter will likely be at their peak. The contest period starts Friday at 7pm and runs until Sunday at 7pm. Conditions are usually not all that good in the Northeast at the start of the contest. Instead, you want to focus on Saturday and Sunday, 7am until 7pm. The peak openings to Europe will be 8-11am and the peak openings to the US will be 1-4 pm. Simply exchange signal report and state. DX stations (*and there will be plenty of them*) will send you a serial number. If you have a code license, get on and make some contacts. You are guaranteed to have a ball! If your license doesn’t allow access to 10 meters, try some of the multiop efforts being organized in the area at K1HD or at WJ1Z.

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OUR LAST RANV MEETING

by Fred N1ZUK, Sec'y

The attendees of the November RANV meeting had come with two items to address: the election of new club officers, and to witness (via radio) the launch of the long-awaited Phase 3D satellite.

After a non-partial panel hand counted all of the ballots, the results of the election for new RANV club officers: Paul AA1SU reelected as President; Brian N1BQ elected as Vice President/Treasurer; and Grant K1KD elected as Secretary. There were no write-in votes for any position. Congratulations to all of the new officers.

Paul AA1SU announced that the Multiple Sclerosis Association is looking for volunteers for a Bike-a-thon to be held later in the year, once the weather is warmer. More information will be found in an upcoming newsletter.

Also discussed was the upcoming RANV Holiday Party, which will be held December 12 at the QTH of W1SJ and W1DEB. As the food ran out early last year, the club voted unanimously to increase the funding of refreshments for up to \$100 this year. Along with the usual socializing, the newly elected club officers will be installed.

Fred N1ZUK, who is the VUCC Manager in our area, related this story: After arranging to have some QSL cards validated for an endorsement to his 6-meter VUCC award, he sent his cards to Bill Dodge K1BD in New Hampshire. Only after (*quickly*) having his cards returned, did find out that Bill had undergone heart bypass surgery, having validated all 100 cards from his hospital bed! We would like to wish Bill a quick recovery, and a happy holiday!

Brian N1BQ gave an update of the Tuna Tin construction night held at last month's meeting. After a follow up session held at his home, there are now a good number of transmitters that have been completed, and have been heard on 40 meter. He is also planning a night where all those who built one will be on the air, putting Vermont on the airwaves with their 200 mW of RF power.

Our guests for the evening were Mike N1JEZ and Tom N1GZZ, to discuss what's new in amateur space communications. They had brought with them a great PowerPoint presentation, with many of the latest pictures of the Phase 3D satellite being prepared for launch; as well as a receiver to listen to the launch of the Ariane rocket that was to put the satellite in orbit that evening. Unfortunately, launch problems postponed the show for 24 hours.

First, they discussed the International Space Station (ISS), which recently received some of its ham radio equipment. The equipment is temporarily set up in a service module, awaiting its permanent home in the crew quarters. FM phone, packet, and SSTV will be some of the operating modes available for hams to work the new space station, which should be a popular station as the MIR is being decommissioned.

Next, the Phase 3D satellite was covered in great detail. Having capabilities of operating from 15 Meters all the way up through light, the satellite can be configured from the ground control station to operate in many modes simultaneously. Having taken over 10 years to get in the air, it is by far the most ambitious project that AMSAT has ever attempted. After a successful launch, almost everything is working as planned. It will take about 1 year for the satellite to reach its final high altitude elliptical orbit, but once obtained, it will allow for a large area of coverage lasting many hours a day.

THE PREZ SEZ

by Paul AA1SU, President

Now that the elections are over, we can get down to doing the people's business, and running the club that you, the hams, elected me to do. I wish to express my gratitude to those that are leaving my administration. Richard WN1HJW, our outgoing Vice President/Treasurer, has performed an outstanding job over the past two years with the club funds. Fred N1ZUK, has done an incredible job with the meeting minutes and also contributed several inspiring articles. I applaud both of you, and I know that you will both continue to be active members.

Please join me in welcoming Brian N1BQ as our new Vice President/Treasurer, and Grant K1KD as our new Club Secretary. I am looking forward to working with them in the 12 months to come. We will all be installed at the December Holiday Party, without much fanfare. I think that between the three of us, we should be able to keep the meetings interesting and helpful, without driving each other crazy.

If you are unable to make it to the monthly meetings, maybe you will be able to make it to this month's party. I really encourage you to come over to Mitch's house, to have some fun, and meet the new officers face to face. The details are on the front cover of this newsletter. Speaking of Mitch, I also wish to thank him for doing such a great job, month after month, with the RANV News & Views, as well as the Web Page. The quality of both is without peer.

We are planing another exciting year. The attendance over the past several months has been exceptionally high and I really appreciate that. One of our own is now President of BARC. Bob WE1U has taken on this task, and we wish him and his cabinet the best of luck in the coming year. As you know, Bob is also the Vermont Section Manager, a Red Cross Coordinator and goodness knows what else. His plate is quite full, but he still makes it to the RANV meetings.

I hope to see all of you at the party and over the next several months.

REPEATER NEWS

By Mitch WISJ

The Second Trip - Sunday, November 26th

Last month, we left everyone with the repeater working near perfectly. At this point in the story, we would say, "...and they lived happily ever after." But nooooo, it was not to be. On a Friday night, a mere 10 days after the trip, a bunch of us were on talking about how great the repeater was working. Suddenly, noise came on the repeater and held the system open. I quickly enabled the tone decoder, but some form of noise coming from our own transmitter was making hearing anything difficult. A few hours later, things seemed back to normal, but by the next morning, the repeater was dead. It made a few cameo appearances during the day, but was largely usable. With Sweepstakes coming up, I had to be focused on the contest at hand so I didn't do anything until Monday. At that point, I found that the repeater output was actually there, but very, very weak. It was S-1 on the big yagi. Occasionally, the repeater would come back to normal and disappear just as quickly. From listening to what the various receivers and transmitters were doing, it was apparent that the exciter board (which was replaced 10 days ago) was unstable. Another trip was necessary. There was 18 inches of snow on the summit and there would be no access by chairlift or snowmobile for a week or two. I was not pleased.

Several days of the Thanksgiving holiday was spent getting out various replacement boards and testing them. Because no one knew exactly what the problem was, a lot of spare parts had to be brought in - just in case. That Sunday, Neal and I made the long hike up the hill.

It was not a good day for a hike. A front was coming in. Although the temperature warmed up to 40, winds and freezing rain were the order of the day. I packed as light as I dared - the minimum tools and stuff needed. I didn't even have a flashlight, which really was needed later. The trip was very long in the snow - some 2 and half hours. At the top, I had to break trail with snowshoes, which is a slow process. We finally arrived after 12 noon and took until 1 to dry out rest and have lunch.

A quick check of the repeater confirmed it wasn't putting out much power - about 10mW by my guess. Of course, when I opened it up and got it into a position to do work, it started working wonderfully. I wasn't impressed. I quickly changed out the exciter board and fixed a connecting cable. I also changed the exciter board on the UHF transmitter, fixing the bad audio problem.

While reassembling everything, I noticed a charred resistor. This resistor is connected across the audio output (unused by the repeater) because without a load, the audio system oscillates. Although not know for sure, it could be very likely that the failure of this resistor caused enough oscillations on the power buss to make the exciter unstable. The repeater failure occurred suddenly, just like when a resistor burns up. Whether this actually is the cause and why the resistor died will be left for later failure analysis. The good news was that the repeater came back on the air beautifully with full power, good sensitivity and no noise (except when Tony inserted some digital noise on the input to drive me crazy).

With everything working, we quickly packed and got our butts out of there.

It was 4:30 and light was fading fast. Worse than that, the freezing rain coated everything and made things tricky. The antenna was coated with at least 1 inch of ice. The top part of the hill went quickly, even if footing was a bit treacherous. With the warmer temperatures, we would occasionally break through the snow and sink down into a lake or stream. Snow and mud - ugh! An hour later, we were on the ski trail, but it was very spooky since it was pitch black and foggy. It was like walking into nothingness. Remember the flashlight I left behind?

Fortunately, this part of the trail was well groomed. Finally, we got the halfway station and were able to focus in on the lights of the lodge. It only took 1 and half hours to get down!

Since the repeater failed the last time we praised it for working well, you'll hear a lot of "the repeater sounds terrible" talk for a while. We ARE superstitious! Pray for the repeater! I don't want to go back there for another year!



New repeater antenna at right



Overhead view of cramped quarters of repeater & duplexer

CONTEST CORNER

By Paul AAISU

The period from mid-December to mid-January looks quiet as far as ham radio contests go. This is a good thing, because of the busy holiday season that has crept up upon us. On the weekend of December 16th, you can work some CW in the *Croatian CW Contest*, or some RTTY in the *OK DX RTTY Contest*. Both are everyone-works-everyone contests, and both are 24 hours in duration. On December 23rd, there are actually no contests scheduled, so I will take this time to start my holiday shopping. I hope that you will do the same.

Moving on to December 30, there is a cute little 160 Meter Contest called the *Stew Perry Top Band Distance Challenge*. It is one night, no packet is allowed, and exchange is (*are you ready for this?*) grid squares. Scoring is one point per QSO, and one point per 500 km worked. The only multiplier is your power setting. If your logging software does not support this one, the contest sponsor will figure up your score. Last year, K1ZM Jeff Briggs won this contest with QRP power. Only one break of 30 minutes or more is allowed. This contest is dedicated to Mr. 160 himself, Stewart Perry W1BB. He was a pioneer in the early days of the top band. For more on Mr. Perry and 160-Meter history, I highly recommend the book *DXing on the Edge, The Thrill of 160 Meters* by K1ZM. It is available through the ARRL.

On New Year's Eve, one could always try the ARRL Straight Key night. It starts at 7 PM, and runs for 24 hours. As the name implies, no electronic keys are allowed. This is a friendly event, to enjoy some good old-fashioned QSO fun. The emphasis is on ragchewing rather than fast exchanges. You should send SKN, rather than RST. This will clue in passers by. Last year, I happened to work W1AW. When I sent for the QSL Card, I received back a very nice Y2K Certificate, along with my SASE. That was rather nice of them, don't you think? Complete details about Straight Key Night can be found on page 99 of the December QST.

For those of you thinking of trying some RTTY, on January 6 is the ARRL RTTY Roundup. It starts at 1 PM on Saturday, and ends at 7 PM on Sunday. You can operate no more than 24 of the 30 hours. PSK31 is allowed and is gaining in popularity. I highly recommend this contest, even if you have never tried RTTY before. If you are familiar with Packet Radio commands, and have a terminal program like Procomm, you could actually have a lot of success at it. The newer contest software will support it too. You can find complete details on page 111 of the December QST. Give it a try; it'll be fun!

Another fun one to try on January 6, is *Kid's Day*. The hours are 1 PM to 7 PM Saturday. Details are on page 45 of QST but basically, you invite the children in the neighborhood, or the house, to get on the air and talk with other youngsters. Call "CQ Kid's Day" on the suggested frequencies or on the local repeater. The exchange could be name, age, location, and favorite color. This is good for most of you, because it is short, no CW, and no quick contest exchange. What more could you ask for? See what happens when you read this to the end? You find something even you can do here.

Next month, WE are the DX in the Vermont QSO Party!

SATELLITE NEWS

from Mike N1JEZ

You may be wondering what happened with the satellite launch we were supposed to hear at last month's meeting. The launch went well and the satellite is working quite well. One glitch is that the 70 cm transmitter doesn't seem to be working, but everything else is working well, so far. Mike N1JEZ has been updating us via the E-mail reflectors on what is happening with the former Phase 3D.

Following its successful launch at 0107Z November 16, 2000, Phase 3D, the spacecraft so many have been working on for the past 10 years, now has a new name. It will take in place in the long line of OSCARs – satellites built by the Amateur Radio community for the Amateur Radio community throughout the world. Therefore, Phase 3D will henceforth be called AMSAT-OSCAR 40 or AO-40 for short. AMSAT-OSCAR 40 is dedicated to the memory of one of its principal builders Werner Haas, DJ5KQ and operates under the call sign DP0WH, the "WH", of course being Werner's initials.

AO-40 is alive and well in its initial transfer orbit. First telemetry has been received and the command teams are beginning to interrogate the bird. More launch information and screen shots of the telemetry is available at: <http://www.amsat-dl.org/journal/adlj-p3d.htm>. The 400-baud telemetry has been switched to 145.898 MHz at this point.

If you're interested in checking AO-40 telemetry, it is suggested that you get the program P3T.EXE and use the Internet to hear the telemetry. P3T is the telemetry program Mike demonstrated at the RANV meeting. He has tested the Internet connection and it works fine. P3T can be found at: www.cstone.net/~w4sm2/software2/P3t_AP.zip. It's pretty small at 550K. Nino, IZ8BLY has just released a version of his Sound Card telemetry decoder that will talk to the P3T program via

TCP/IP. It is at <http://iz8bly.sysonline.it>.

With these two programs you can copy, decode and display realtime telemetry from AO-40 with just a sound card with no dedicated modem required.



Blastoff!

MURPHY'S LAW: GOING FOR THE RECORD

You may have noticed that we have had our share of problems on the repeater this year. Four trips in one year is not good reliability. We have averaged 1 per year in the past 5 years. What has gone wrong?

A clue to the answer came in some correspondence with WA1ZMS. He asked if someone in Haiti had put a curse on me with a voodoo doll. And then it occurred to me – it has been a Murphy year! Those of us in amateur radio are very familiar with Murphy's Law: "If anything can go wrong, it will." As far as electronics goes for me, Murphy's Law has reigned supreme, superseding established laws like Ohm's Law and Maxwell's Laws.

This latest curse appears to have started just before the VHF QSO Party in September, 1999. The two-meter amplifier was acting up, so I sent it out for repair. It got delayed in transit. We used a backup amplifier in its place. It blew up. By the end of the contest, the list of broken equipment was longer than the list of working equipment. A 222 MHz transverter, which worked perfectly for 20 years, decided to take up smoking. Two out of three rotators failed. And a voice keyer died.

I thought the VHF Contest was an isolated incident, but stuff continued to die. I went to use the UHF section of my duoband radio and found that it had a working range of two blocks. The output was down to a mW. Several months later, I attempted to fix this radio. I knew where that problem was but couldn't see the surface mount devices well enough to test them! Recently I sent this radio to a repair shop. For \$60 they broke the VHF side as well and then told me the radio wasn't worth fixing. Shucks, I can break the radio myself, for free.

Was all of this some Y2K plot? No, because it still occurred after the new year. Early in the year, my old IBM computer started acting up. Not really out of the ordinary, since this was common. The fix was a slap to the side of the case to reseal a bad connection. However, this time, something came loose (!) in the hard drive. This piece is the retractor for the head, which was easily fixed the first time. However, it continued to act up and after one of the fixes, I couldn't access the drive. Whoops, I used the magnetic screwdriver! Fortunately, this was the back-up computer and most of the important stuff was backed up.

Field Day didn't see too many equipment problems, but a key problem was in the satellite receiver preamp which couldn't get a good solder connection to the BNC connector. A couple of months later, my FT726 multimode radio would not transmit on UHF.

Oh yes, and my new HT got a little wet during one of the Fox Hunts and it is starting to act weird on UHF. Where does it all end?

So, I can't really get too excited about the failed antenna, fried resistor, blown transistor and leaky cap I've found on various trips to the hill this year. It is all in the scheme of things. Or as they say, "#@## happens!"

Now, can I borrow your radio? I'm a little short right now!

NEW HAMS AT CTE

Very quietly, a school in our area has been turning out new hams! The Center for Technology Essex (CTE) is a Technical Center located in the back of Essex High School. They have all sorts of interesting career programs there, such as Auto Mechanics, Graphics, Dentistry and Building trades. The Telecommunications program, taught by Joe K2KBT, features training in electronics and telecommunications. As part of the curriculum, students study for their amateur radio exams. Some also go on to take and pass the FCC General Radio Operator's License and the Mobile Certification exam. The list of hams who have come out of this program include:

| | | |
|--------|-----------------|----------------|
| N1YWB | Jeff Laughlin | Williston |
| KB1DGP | Brian Poquette | Essex Jct |
| KB1ECX | Chris Magnant | Richmond |
| KB1ECY | Jay Abustan | So Burlington |
| KB1EDS | Nga Le | Essex Jct |
| KB1EDT | Michael Butler | Burlington |
| KB1EDU | Chad Brunell | Montpelier |
| KB1EUE | Damien Thibault | Milton |
| KB1EUF | Scott Haskin | Waitsfield |
| KB1EUG | Rick Stehmeyer | Grand Isle |
| KB1EWB | Chris Gleason | Fairfax |
| KB1FZ? | Yen Duong | Winooski |
| KB1FZ? | Gabriel Epstein | Essex Jct |
| KB1FZ? | Eric Martin | Jeffersonville |
| KB1FZ? | Joshua Miller | Worcester |

The last 4 on this list have just passed their exams on Tuesday and are awaiting call signs. Some of other folks on this list you might recognize from on the air contacts. N1YWB and KB1EDU are heard regularly on the repeater. Last year's class of KB1's EUE, EUF, EUG and EWB all had HT's and were often heard on many different repeaters coordinating their movements and activities. Another call associated with this group, but not on the list, is Bob WE1U, who graduated from the Technology Center a long time ago and who now comes back to help administer the VE sessions.

The Telecommunication class has a fully operational station, W1CTE, consisting of a IC-706IIG and vertical antennas on HF and VHF. They are on the air daily, when school is in session. They also have a schedule with W1VTC (at VTC) on MWF at 10 on 145.15. Other classes are welcome to join in!

VE SESSION

The last VE Session for 2000 will be held December 15th at 6pm at the Essex Town Office, 81 Main Street. The exam fee will be \$6.65. The fee is expected to go up to around \$8 next year. Applicants should contact W1SJ prior to the session.

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Please send submissions for newsletter to the
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RANV GALA HOLIDAY PARTY

Tuesday, December 12th
5:30-11pm
at W1SJ

RANV

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